

CLEAN AIR ACT SECTION 112(r) INSPECTION REPORT

Linde Gas Puerto Rico, Inc. Catano

Catano, Puerto Rico

GENERAL INFORMATION

Stationary Source	Linde Gas Puerto Rico, Inc. Catano
Date of Inspection	March 14, 2008
USEPA Inspectors	Dwayne Harrington, USEPA – Region II (Edison, NJ) Carlos Rivera, USEPA – Region II, Caribbean Office, Enforcement Jose L. Ayala – RST 2, USEPA – Region II
Contract Auditor	Neil Mulvey, Sullivan Group (Subcontractor)
Description of Activities	<ul style="list-style-type: none">• Opening meeting with facility representative.• Program audit.• Closing meeting with facility representatives. <p>Program audit consisted of the following activities:</p> <ol style="list-style-type: none">1. Document review.2. Field verification.3. Personnel interviews.

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000 0005 5432
Date of Latest Submission (used for RMP inspection)	Receipt Date: December 20, 2005 (Correction) Anniversary Date: August 26, 2009
Facility Location	Road 869 KM 1.8 Bo. Palmas Catano, PR 00962 Tel. (787) 641-8567
Number of Employees	RMP*Submit states 40 employees. Union employees.

Description of Surrounding Area	The facility is located in a commercial / industrial area. The facility occupies approximately 5-acres. Commercial businesses are located immediately adjacent to the facility.
Participants	<p>Participants included:</p> <p>Dwayne Harrington, USEPA – Region II, Edison, NJ Carlos Rivera, USEPA – Region II, Caribbean Office Jose L. Ayala, USEPA Contractor – RST2 Neil P. Mulvey, USEPA Contractor – Sullivan Group Jorge Colon, Cylinder Operations Manager / Plant Manager, Linde Gas* Manuel Rodriguez, Safety & Health Manager (ER Team Manager), Linde Gas</p> <p>* Lead representative for Linde Gas.</p>

REGISTRATION INFORMATION

Process ID #	64325 (Ammonia Storage) 64326 (Chlorine Storage) 64327 (Sulfur Dioxide)
Program Level (as reported in RMP)	Program 3 (all processes)
Process Chemicals	<p><u>Ammonia Storage</u> Ammonia (anhydrous) @ 73,000-lbs.</p> <p><u>Chlorine Storage</u> Chlorine @ 18,000-lbs.</p> <p><u>Sulfur Dioxide</u> Sulfur dioxide (anhydrous) @ 8,000-lbs.</p>
NAICS Code	32512 (Industrial Gas Manufacturing)

BACKGROUND

An initial RMP Compliance Inspection of the Linde Gas, Catano, Puerto Rico facility was conducted on September 19, 2005. A complete report of that RMP inspection, including an RMP Summary Report with attachments and photographs and a completed RMP Program 3 Checklist was submitted to the USEPA, Region II office.

The RMP Compliance Inspection conducted on March 14, 2008 constituted a complete re-inspection of the facility. This report therefore has been prepared as a stand-alone report separate from the report of the September 19, 2005 inspection. However, many of the RMP programs and procedures remain unchanged, therefore many of the findings are similar to those identified in the September 19, 2005 report. This report used the same base report from the September 19, 2005 inspection and provides updates and re-verification as determined from the March 14, 2008 inspection. In particular, the March 14, 2008 inspection focused on a review of the status of recommendations identified in the September 19, 2005 inspection

GENERAL COMMENTS

Linde Gas Puerto Rico, Inc. Catano (Linde Gas) receives, stores, packages, and distributes pressurized liquids and gases. Bulk gases are received via tank truck or isotainer, transferred to storage, and packaged into pressurized cylinders for distribution. Other material is received in cylinders, stored as received, and distributed. The facility also manufactures specialty gases by mixing gases. The facility also manufactures acetylene gas.

The facility operates as a day-shift only operation. The facility typically does not operate on weekends and holidays. Normal operating hours are 6:00 AM – 5:00 PM. Distribution personnel may be on-site until 8:00PM. The acetylene manufacturing operation may operate from 3:00 AM to 9:00 PM. Security guards are on-site 24-7.

Organization includes a Plant Manager, Manager of Distribution, two Distribution Supervisors, five loaders (responsible for cylinder movements), and drivers for cylinders and bulk liquids.

Linde Gas registered three RMP covered processes. Each is briefly described below.

Process ID 64325 – AMMONIA STORAGE

During the September 19, 2005 inspection, this process included the bulk receipt of anhydrous ammonia in isotainers, unloading, and two 6,000-gals. storage tanks. The process also included trans-filling of anhydrous ammonia cylinders from the bulk storage tanks.

As of November 2006, the facility no longer operates the anhydrous ammonia storage tanks or performs transfilling of anhydrous ammonia cylinders. The anhydrous ammonia process is limited to:

- ❑ Receipt of isotainers (25,000-lbs.); isotainer storage; isotainer distribution.
Typically no more than two isotainers are on-site at one time.
- ❑ Receipt of cylinders (150-lbs. and 15-lbs.); cylinder storage; cylinder distribution.

There is no transfilling of cylinders. Isotainers and cylinders are supplied by Tanner Industries.

The facility RMP registration lists 73,000-lbs. of anhydrous ammonia. This quantity is based on the inventory of the two storage tanks and cylinder storage inventory. This quantity does not reflect the changed process. The worst case scenario is based on an ammonia storage tank, which is no longer applicable.

Process ID 64326 – CHLORINE STORAGE

No change to this process since the September 2005 inspection.

This process simply involves the receipt, storage, and distribution of 150-lb chlorine cylinders. Chlorine is not processed or transferred. The process involves only the movement of chlorine cylinders. Linde Gas owns the cylinders. The cylinders are filled by Air Gas, Ohio, USA, and supplied by Laser Products, Juncos, Puerto Rico.

The facility RMP registration lists 18,000-lbs., or 120 150-lbs. cylinders.

Process ID 64327 – SULFUR DIOXIDE

This process was not registered by the facility at the time of the September 2005 inspection. During the September 2005 inspection, inspectors noted that cylinders of SO₂ were present on-site. SO₂ is received for resale in 150-lbs. and 1500-lbs. cylinder size. In September 2005, facility personnel reported that they did not exceed the 5,000-lbs. threshold quantity for SO₂. The facility subsequently decided to register for SO₂.

The SO₂ process includes the receipt, storage and distribution of 150-lbs. and 1500-lbs. SO₂ cylinders. No transfilling occurs.

Facility management reported that there were no incidents or releases involving anhydrous ammonia, chlorine or SO₂ since the September 2005 inspection.

RMP DOCUMENTATION

The facility has a RMP Manual, dated September 3, 1999 which contains written procedures for the various RMP program elements.

Comments regarding select RMP elements follow:

Management System [40 CFR 68.15]

The Plant Manager has overall responsibility for the site and for implementation of the RMP program. However, there is no written description of management responsibility for RMP.

Hazard Assessment [68.20-68.42]

The facility's RMP OCA information for their worst-case release submitted in 2004 is consistent with the values obtained by EPA. However, their revised OCA information submitted in 2005 includes OCA's for all of their processes, not just their single worst-case release. In addition, their revised OCA information is not consistent with their revised current anhydrous ammonia inventory.

The facility must review, and, as necessary, revise and resubmit their OCA information to reflect current inventories of regulated substances on site.

Process Safety Information (PSI) [40 CFR 68.65]

The RMP Manual contains a written description of PSI. The facility has information available on the hazards of the regulated materials handled. The facility also has detailed specification sheets on equipment used in the regulated process.

There is no documentation that verifies that equipment and operations comply with recognized and generally accepted good engineering practices. There was no electrical classification information available for review.

Process Hazard Analysis (PHA) [40 CFR 68.67]

The RMP Manual contains a written description of the facility's approach for conducting PHAs.

No PHA revalidations have been conducted since the September 2005 inspection. The next revalidation for the chlorine storage process is due in April 2008. The PHA revalidation for the anhydrous ammonia storage and distribution process is due in April 2008. There has been no PHA conducted of the SO₂ storage process. Facility management reported that the PHA was planned for April 2008.

Checklist reviews were also conducted for the chlorine process, both the initial PHA (11/29/00) and the PHA revalidation (4/15/03). No recommendations were identified.

Standard Operating Procedures (SOPs) [40 CFR 68.69]

The RMP Manual contains a written description of the facility's policy for SOPs. The facility has written procedures for:

- General Cylinder Inspection and Transfilling Procedure; no date
- Confined Space Entry procedure; 3/1/00 (English and Spanish)
- Lock-out/Tag-out Procedure; 3/1/00 (English and Spanish)

The procedures do not provide information on operating limits, safety and health considerations, and safety systems and their functions.

The facility utilizes a general "Operating Procedure Certification" sheet for annual review and certification of SOPs, which were last certified on 5/3/05. This form does not list the SOPs specific to the RMP regulated process included in the annual review and certification. Reviewed SOP # PR-SE-0100 (Procedure for Handling Cylinders). The effective date of the procedure is 8/08/05, but showed revision #3. Facility management reported that revision #3 means that the last review/certification was 3 years from 2005 (reported revised annually).

Training [40 CFR 68.71]

The RMP Manual contains a written description of the facility's policy for operator training. The facility has records of initial and refresher operator training. The most recent refresher training was conducted on 8/27/05. Refresher training is due no later than August 2008.

Mechanical Integrity [40 CFR 68.73]

The RMP Manual contains a written description of the facility's policy for mechanical integrity. The mechanical integrity program includes a schedule of inspection and tests on regulated equipment. The facility utilizes a preventive maintenance work order system for scheduling and documenting inspections.

Management of Change (MOC) [40 CFR 68.75] & Pre-Startup Review (PSR) [40 CFR 68.77]

The RMP Manual includes written procedures for MOC (dated 5/15/00) and PSR (dated 7/1/92). These procedures include forms to document completion of MOCs and PSRs. The procedures address the RMP regulatory requirements. There were no completed MOC / PSR reviews on file for review.

Compliance Audits [40 CFR 68.79]

The RMP Manual includes written procedures for conducting compliance audits. A PSM audit was conducted by an independent contractor on 11/28/00. A checklist audit report and status report of recommendations is available on file for review.

A second PSM/RMP audit was conducted on 5/3/05 by Linde Gas personnel. A checklist audit report is available on file for review. The audit identified one recommendation which was resolved. The next three-year RMP compliance audit is due by May 2008.

Incident Investigation [40 CFR 68.81]

The RMP Manual includes written procedures for conducting incident investigations. The facility completed a thorough investigation and report of an ammonia release that occurred on 8/16/05. The incident investigation procedures were properly implemented. The incident report includes several recommendations to prevent reoccurrence.

Employee Participation [40 CFR 68.83]

The RMP Manual includes written procedures regarding the facility employee participation program.

Hot Work Permit [40 CFR 68.85]

The RMP Manual includes written procedures for conducting hot work. The procedures comply with §1910.252(a).

Contractor Safety [40 CFR 68.87]

The RMP Manual includes written procedures for contractor safety. Facility management reported that contractors are rarely retained to work on or near the covered process. The facility did however use an outside contractor when conducting integrity inspections on the ammonia storage tanks. The tanks have been removed and use of outside contractors for this service is no longer applicable. There were no contractor review records on file for review.

Emergency Response [40 CFR 68.90 – 68.95]

The facility does not maintain an internal hazmat response team. The facility maintains an emergency action plan to evacuate the facility, and coordinates with the local emergency services and LEPC to respond to and mitigate emergencies at the facility.

FACILITY TOUR

Several items noted during the facility tour include:

- ❑ During the facility tour the SO₂ cylinder inventory was noted as: 38 150-lbs. and four 1500-lbs. cylinders. The total inventory therefore was 11,700-lbs. The facility registered 8,000-lbs. **The facility should update the RMP registration to represent the correct SO₂ inventory.**
- ❑ **FROM SEPTEMBER 19, 2005 INSPECTION** - The wind sock installed at the ammonia storage tank area appeared to be at a height too low to accurately represent actual wind direction and strength. **The facility should evaluate the height of the wind sock and adjust as necessary.** **STATUS** – Resolved. The facility installed an additional wind sock to accurately represent actual wind direction and strength.

FINDINGS/RECOMMENDATIONS

FINDINGS:

Registration

- ❑ The facility RMP registration lists 73,000-lbs. of anhydrous ammonia. This quantity is based on the inventory of the two storage tanks which no longer exist. The worst case scenario is based on an ammonia storage tank, which is no longer applicable. **The facility must submit a corrected RMP registration to reflect the changed anhydrous ammonia process.**

- ❑ **Hazard Assessment /68.20-68.42/**

The facility's revised RMP OCA information is not consistent with their revised current anhydrous ammonia inventory, and includes OCA's for all of their processes, not just their single worst-case release. **The facility must review, and, as necessary, revise and resubmit their OCA information to reflect current inventories of regulated substances on site.**

- ❑ **FROM SEPTEMBER 19, 2005 INSPECTION** - Inspectors noted that cylinders of SO₂ were also present on-site. SO₂ is received in 150-lbs. cylinders and 1-ton cylinders for re-sale. Facility personnel reported that they do not exceed the 5,000-lbs. threshold quantity for SO₂. **STATUS** - On 12/20/05, facility submitted new RMP*Submit registration listing SO₂ at 8,000-lbs. No change in quantity of anhydrous ammonia or chlorine. Facility management reported that they completed a survey and identified only SO₂ as RMP regulated and above threshold quantity. The facility primarily used their Tier II reports for the survey. **Given the various types of hazardous materials handled at this site, the must perform a thorough inventory**

check to determine if any other RMP regulated material is handled in quantities exceeding the threshold quantity.

Management System [40 CFR 68.15]

- **FROM SEPTEMBER 19, 2005 INSPECTION** - The Plant Manager has overall responsibility for the site and for implementation of the RMP program. However, there is no written description of management responsibility for RMP. **The facility must develop a written description of its management system, as required by §68.15. STATUS** - Unresolved.

Process Safety Information (PSI) [40 CFR 68.65]

- **FROM SEPTEMBER 19, 2005 INSPECTION** - There is no documentation that verifies that equipment and operations comply with recognized and generally accepted good engineering practices. **The facility must determine and document that existing equipment is designed and constructed in accordance with good engineering practices, as required by §68.65(d)(2). STATUS** - No longer applicable for anhydrous ammonia storage tanks and transfilling operation. Facility management reported that their supplier is responsible for performing integrity tests and pressure tests on isotainers and cylinders. Facility performs visual inspection of cylinder upon receipt from supplier and returns from customer. Records of visual inspections maintained on file.
- **FROM SEPTEMBER 19, 2005 INSPECTION** - There was no information regarding electrical classification available for review. **The facility must prepare information regarding electrical classification, as required by §68.65(d)(1)(iii). STATUS** – Unresolved.

Process Hazard Analysis (PHA) [40 CFR 68.67]

- There has been no PHA conducted of the SO₂ storage process. **As a newly covered process, a PHA must be conducted on the SO₂ storage process.**

Standard Operating Procedures (SOPs) [40 CFR 68.69]

FROM SEPTEMBER 19, 2005 INSPECTION - The facility utilizes a general “Operating Procedure Certification” sheet for annual review and certification of SOPs, which were last certified on 5/3/05. This form does not list the SOPs specific to the RMP regulated process included in the annual review and certification. **The facility must verify that the SOPs specific to the RMP regulated process are annually certified, as required by §68.69(c). STATUS** - Reviewed SOP # PR-SE-0100 (Procedure for Handling Cylinders. Effective date of procedure is 8/08/05, but showed revision #3. Facility management reported that revision #3 means that the last review/certification was 3 years from 2005

(reported revised annually). **The facility must document the actual date of the annual certification on each SOP.**